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A Christmas Tale—T32C

By Don Field, G3XTT

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Christmas Island (Kiritimati in the local dialect—"ti" is the local spelling for the "ss" sound) lies some 1300 miles south of Hawaii, very close to the equator. The major land masses are a long way off – 3500 miles to the nearest landfall on the US mainland, 5000 miles to Japan. As for Europe, it's a long haul!

So named because it was discovered by Captain Cook on Christmas Day (and not to be confused with the other Christmas Island, VK9X) the island is part of what is now Eastern Kiribati (pronounced "Kiribass"), the capital of Kiribati being Tarawa (T30) some 2,000 miles to the West. This is a very elongated "country"!

EARLY PLANS

T32 has been on the Five Star DXers (FSDXA) hit list for over ten years, ever since Neville G3NUG called in there on a Pacific Cruise and realized it had potential as a DXpedition destination. FSDXA have developed a *modus operandi* of going to locations that are reasonably rare (preferably top 50 "Most Wanted"), but which have landing facilities for a shipping container and, ideally, can also be accessed by air. We don't target places that are really hard to reach or which are politically unstable—we leave those to others. But we do try to activate our chosen locations in a big way, offering the chance for new bands and modes to even the most modestly equipped operators. T32, as Neville discovered, has container facilities and a weekly airline service and, best of all, the one hotel (there are also a few small fishing lodges) is located right on the north coast of the island, with a perfect take-off to all major amateur radio populations.

We had never managed to make T32 happen—the Pacific is a bigger challenge logistically than the Indian Ocean which has been the destination for our three most recent trips. It is more costly and more time-consuming for the (predominantly) European team to get gear and personnel out there. But we were determined to show that a Pacific DXpedition could do a good job for Europe, something which we felt many Pacific DXpeditions failed to achieve. In the meantime there had, indeed, been some very successful Pacific trips, with VP6DX (Ducie Island) not only being by far the most outstanding, but also having taken several of our previous records! This time we wanted to go for it but, instead of waiting our usual three years between trips (each takes roughly a year to plan, and a year afterwards to handle QSLs, write articles, make presentations, etc) we decided to wait four years in the hope that propagation would take the long-awaited upturn.

IT STARTS TO COME TOGETHER

G3BJ and G3NUG made a recce trip in 2010 and the omens were good. The hotel would welcome the business (tourism on T32 is pretty thin on the ground—mainly a few Americans and Japanese there for the fishing) and everything else looked straightforward—licensing, shipping, air travel for the team, etc. The Republic of Kiribati was created out of various parts of the old British Empire and bureaucracy follows a traditional colonial pattern, slow but sure.

inside...

Daily Information Session ceases as technology advances

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The Team which brought you T32C. Standing L-R: DG1CMZ, W3EF, G3UML, G4FAL, G3RWL, Pete the Penguin (ex VP8ORK), G3SVK, G3WGN, DK1II, G3UNA, F2JD, G3WPH, EI5DI, N6HC, G0OPB and GM3POI. Sitting L-R: PA3EWP, ON7RU, G0VJG, G4DRS, DK7YY, EI9FBB, KG4UVU, G4LDL, N6OX, G3XTT, G4TSH, MD0CCE, G7VJR, FM5CD, G3NUG, G3USR, G4IUF, G3SVL, G4AXX, G3WGV, G3YBY, GU4YOX and W5FT.

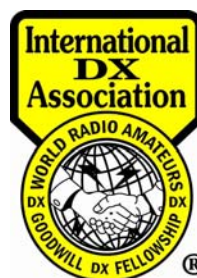
We knew that European openings would be relatively short, but that around dawn and dusk there were likely to be some frantic periods when most bands were open to EU. We therefore wanted to be able to run multiple stations during those band openings to maximize the number of European contacts in the log. We also felt that, to do justice to taking gear halfway round the world, we should be active for three weeks and four weekends. Doing the sums, including catering for band openings to JA and North America which would last for many hours each day, and taking the best propagation predictions available during our planning phase, we reckoned on needing up to 16 stations (10 bands, including 6m, with second stations on 10m, 15m, 20m, 30m, 40m, and 80m) and 30 operators, based on two or three 4-hour shifts per operator per day. (This is a rough calculation—there is always plenty of non-operating work to be done, whether maintaining equipment and antennas, or sorting out IT and power issues). In practice, we had a core of team members on the island for the whole period (indeed, three went out a week early as an advance party) with the remainder going for the first or last two weeks. In total, 38 operators took part in T32C.

DEMAND AND SPONSORSHIP

This was going to be our most expensive trip yet, and we were anxious to offset at least some of the cost through sponsorship (we expect team members to pay for travel, accommodation and a contribution to radio-specific costs such as buying and shipping equipment). The US Foundations were less supportive than for our previous trips, as they tended to consider T32 relatively common. In Europe it was a different story. That said, we felt

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that there would be a significant demand in North America from the less well equipped DXers who might need T32 on certain bands and modes—this turned out very much to be the case, especially as 10m and 12m had been pretty much dead for the previous ten years or so. By the end of our operation we were working many low power and QRP operators who, with the typical one-week or one-man expedition, would not get a crack at more than maybe a single contact (if that). Since the trip, we have heard a number of stories of local clubs around the US that encouraged their members who might not normally chase DX to get on and work T32C. As a result it seems there are quite a few new DXers in the making.

Our plans having been made, lots of man-days were spent assembling and checking kit and, in due course, shipping the container with 16 Yaesu FT-5000 radios and Quadra linears, Yagis and vertical antennas, peripherals (Microham keyers, filters, etc), coax (several km) and two substantial generators as the recce team had felt that the hotel's generators would not be able to provide sufficient power for what we had in mind. The Captain Cook Hotel has its own supply while London, the main town (actually no more than a large village) has a power station, but the hotel is some 20 minutes' drive from there and there is no power "grid". (Actually, it's worse than that, as the power supply in London is 240V 50Hz, while the Captain Cook Hotel's generator is 110V 60Hz). By April the container was in Suva, Fiji, surely more than early enough to catch one of the regular supply ships which we were assured had to go round the various Kiribati islands every month or so to assure the local populations did not run out of food, water and fuel.

DISASTER STRIKES

Not so! As several recent Pacific DXpeditions have found to their cost, life isn't quite so simple. Ships only go when they have a full cargo and local shippers can be unreliable, to say the least. Things got so bad as far as Christmas Island was concerned that the Kiribati government ended up having to charter an aircraft to fly in emergency supplies. In such circumstances a radio DXpedition didn't, sadly, rate a high priority. In fairness, once it was clear that we had been let down by shippers in Fiji, the Kiribati government offered our container a ride on a landing craft which was due to take some heavy



Despite a shaky start, we were welcomed by a beautiful view of the island on our flight's final approach.

construction equipment to T32 but this plan foundered too, when the craft developed mechanical problems and had to be taken out of service for repairs.

Thus it was that we ended up, some three weeks before departure, with the prospect of an equipment-free DXpedition! We could not countenance delaying--most team members had pre-booked vacation time and non-refundable flights. But what could we put together at short notice and hand carry to the island? This is where the ham spirit really came into play. Yaesu offered us the loan of ten FT-450D transceivers and Nevada Radio of the UK shipped us at short notice several hundred metres of the new lightweight Aircell coax. Team members offered to bring lightweight fibreglass poles for the vertical antennas (we ended up with over 20 poles of varying lengths, from 10 to 18m), plus eight linears (Expert 1k, Tokyo Hi-Power and Acom 1010). The good news was that we had always intended to hand-carry the laptops, and we were also able to borrow a varied selection of Microham units, though interface cables would have to be made up when on the island. It was not only our own team members who loaned us kit, but we were also offered loan equipment by other expedition members and teams—there was a true spirit of cooperation for which we are extremely grateful. Chris G3SVL did a fantastic job maintaining a master spreadsheet to keep track of who was bringing what, and there was just a small amount of last-minute shopping to be done in the day or so we were together in Hawaii to buy some final items (tools, CAT5 cable, mains

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plugs, etc.) from Radio Shack, Wal-Mart, etc.

BACK ON TRACK, WITH EXCESS BAGGAGE!

Assembled at Honolulu airport to check in for the weekly flight to Christmas (operated by Air Pacific, the Fijian national airline) the amount of baggage was quite something to behold! The airline staff weighed our baggage in total, deducted our allowance (23kg each) and G3SVL and MD0CCE then engaged in about 30 minutes of heavy negotiation over the excess baggage charges! Once on board, we were slightly worried when the captain apologised for the delayed take-off, explaining that the aircraft was over weight and some freight was being off-loaded. We had visions of arriving in T32 and our kit still being in KH6! We were reassured when the crew explained that it was regular freight for Fiji which could go on the next flight (there are several direct KH6-3D2 flights a week, with just the one going via Christmas Island).

Once on T32, our start-up was a little slower than originally planned as we had to make up quite a bit of kit, whereas everything in the container had been pre-kitted. But we eventually became QRV late Saturday T32 time (still not the weekend in most of the world as T32 is GMT-14 hours, a unique time zone).

AND ON THE AIR

Yes, there were compromises compared with our original plan. Fewer stations, fewer linears (and just as well—as expected the ancient hotel generator had its limitations but could, most of the time, handle our ten stations and eight linears). But, in due course, we were able to run dual stations on 10m, 15m and 20m, by sharing those stations with 160m, 80m and 40m (there were obviously times when the HF and LF bands were open simultaneously—at those times the LF bands were given priority). The good news was that the high bands really started to open in the weeks prior to our arrival on T32 and stayed that way for most of the trip, with just the occasional solar disturbance to affect the bands for maybe 24 hours at a time. As expected, the US West Coast and Japan were a “chip shot” on all bands, but what was great was the way that the high bands opened to Europe. Interestingly, the path to the UK on 10m and 12m appeared to be skewed in the early days of our operation but quickly reverted to true long-path and (predominantly) short-path for the remainder of the

trip, a sign of improving F2 propagation at those frequencies. The downside was that, contrary to expectations, the low bands proved better at the front end of the trip and became tougher to Europe as the weeks went on, presumably the price to be paid for those improving HF conditions.

As always seems to happen, in order to maintain the appearance to the outside world of a seamless



Wire verticals taped to collapsible fiberglass poles made for a “field day” style of operation when the shipping container failed to arrive.

DXpedition operation being QRV round the clock and exploiting every band opening, there is a constant battle behind the scenes. This time was no exception. The antennas, for example, were vertical wires taped to the fiberglass poles (two-element vertical dipole arrays on the high bands (4-elements on 17m) and quarter-wave verticals on 30m through 80m (a top-loaded T arrangement on 160m), with connections made using “chocolate block” connectors). Within days these had corroded badly—oh, if we could only get our hands on those sealed feed boxes which Justin G4TSH had prepared so meticulously beforehand. Station separation was less than we had originally planned (coax was the heaviest commodity we carried, but still a lot less than we would have liked), but interactions were fewer than we might have expected, largely thanks to the Array Solutions filters generously loaned by Jay WX0B. RTTY proved something of an ongoing challenge, as it relied on the makeshift connection arrangements between the PCs, Microham boxes and radios—again, we had the correct wiring harnesses in the container but, in practice, had to make and

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mend and our *ad hoc* solutions were not as RF-tight as we would have wished.

Once QRV the expedition quickly fell into a routine of operating, eating and sleeping, with the radio



Antennas, antennas, and more antennas. One can NEVER have too many antennas.

team (G0OPB, G4AXX), IT team (G3WGV, G7VJR, KG4UVU) and power team (G4LDL, GU4YOX) foregoing early operating slots to keep an eye on their respective responsibilities in case of problems. But, all things considered, everything ran remarkably smoothly, a tribute both to the assembled expertise but also to the pre-expedition planning which wasn't entirely wasted because much of the thinking that had gone into that early planning was still relevant, albeit that it had to be implemented on the fly.

Just a word about 6m. This band was a non-event from 3B7C, so we planned this time to make our own propagation, by using EME. Kazu JA1RJU, a 6m expert who has been with us on previous trips, was due to join us and focus on this specialism (6m EME is far from trivial). But unfortunately Kazu was hospitalised shortly before the trip and it was left to Mike G3WPH to do some serious homework on how to operate 6m EME. Kazu kindly donated an antenna, though this only came out from Hawaii for the second half of the expedition, and we pressed MD0CCE's Expert 1K linear into service during those "moon windows". The result was 7 EME QSOs (it would have been more but the linear developed a fault) but, most heartening, over 100 terrestrial QSOs, mainly with the southern USA, as F2 propagation returned. This was a real bonus. A full

write-up will appear in the UK Six Metre Group magazine.

LIFE ON T32

There isn't a lot to do on T32 once you have made the trip into "town" (you can see it all in 30 minutes!) and maybe been fishing (several team members enjoyed the experience of landing large tuna, barracuda and other local delicacies). The hotel laid on evening entertainment (music, dance) a couple of evenings a week and the hotel food was of a higher standard than we had expected. But being on such a trip is like being at an extended Hamvention—when not operating there are projects to be completed (antenna work, plugs to be soldered onto newly made-up cables, etc) and plenty of opportunity to talk DX, contesting, antenna lore, etc. with a bunch of knowledgeable and interested fellow hams. The hotel accommodations are basic (the hotel is actually on the site of the Officers Quarters from the 1950s and 1960s when the UK and, later, the US conducted nuclear bomb tests from Christmas Island, hence also the excellent airport runway) but perfectly acceptable. However, due to power limitations, we had to forego air conditioning to allow every



Once all the antennas were setup, stations assembled, networks created, and operating schedules established, there was some time to enjoy a few local benefits.

last watt of energy to find its way to the radios, but it took most of us only a day or two to acclimatize to the local weather. The hotel staff could not do enough to help us and, like every local we met, al-

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ways wore a friendly smile. Swimming was not recommended due to the strong offshore currents. We were also wary after one fishing trip brought back a tuna which had a large bite taken out of it by a passing shark while they were hauling it in!

What to say about the actual operation? The pile-ups were immense, especially during those Euro-



The Captain Cook Hotel even provided traditional local entertainment several times per week following evening meals.

pean openings. The US and JA pile-ups diminished towards the end of the trip but Europe remained there in force. That said, we were able to work down to the low power and even QRP European stations, which was very much what we had wanted to achieve. A post on the CDXC reflector by MM0BQI shows what can be done – he wasn't able to chase T32C until quite late on, so took his car to the coast, for a saltwater take-off, and, within just a few short hours, worked T32C on several bands.

REFLECTIONS

During and since the operation, feedback has been very favorable. With good signals on many bands, deliberate QRM seems to have been less than experienced by other recent operations—we like to think that regular identification and clear listening instructions help in this regard, too. We managed to set a number of new records and regain some that we had held previously. RTTY was a real surprise—despite beating the recently-established (ST0R) record, we never managed fully to satisfy RTTY demand—this is one area that suffered somewhat compared with our original plans, due to not having



When operating was done for a shift and never-ending repair chores were finished, a gaze at the beautiful surroundings offered welcome relief from the endless activity.

second stations on 40m and 30m in particular. All in all we feel that, despite the early set-backs, we had an extremely successful operation and, as it happens, have learned a lot through the non-arrival of the container, lessons which we will undoubtedly be reflecting on in the months to come when we start to think about the next one. In the meantime, expect T32C presentations at a number of clubs and conventions (including Visalia and Dayton). LoTW upload has been done and QSLs are in the mail.

SOME STATISTICS

Full statistics can be found on the Clublog website (www.clublog.org and follow the "Expeditions" menus). Many new records were set, including a new record for North American QSOs of 109,327. Overall QSO total was 213,169—not too bad for a Field Day effort!

THANKS

Thanks, as always, to INDEXA and all our sponsors (see website: www.t32c.com), to the Kiribati government and licensing folks, to the staff of the Captain Cook Hotel, and to all who helped to make T32C such a success.

--73 *Don*, G3XTT

Daily Information Session falls to Information Technology Advances

Dear INDEXA Members,

In mid March INDEXA ended the Daily Information Sessions that had been held for 25+ years on 14.236 MHz. These daily over-the-air sessions were originally used for sharing DX news and QSL information to the DX community.

There was no Internet for DXers when this Daily Information Session started. Others sources of information came mostly from bulletins that were printed and mailed each week or a weekly CW bulletin from W6 land. The Daily Information Session became the "hangout" on the band for the latest and hottest DX info to be exchanged. WOW, have times changed. We now have almost instant flow of information on the Internet.

Over the years there have been many fellows that acted as the Net Control Station on the Information Session on 14.236MHz. Until last year Don, KB6KTV, was the West Coast Net controller until he passed away with health problems. He was always assisted by other faithful New Controllers like Terry, KH6MT/W4; Fred, WA1ZIC; Doug, WQ7B, and some months ago Herb, W9LA. These net controllers

covered the USA propagation very well. The fellows were still faithful in calling the net on most days but over time the activity declined. With the decline in activity the Executive Committee thought it was time to end these sessions, but not without a BIG Thanks of Appreciation to our faithful net controllers.

I hope many of you were able to benefit over time from the information and friendships gained on 14.236MHz.

Thanks,

Gary Dixon, K4MQG
INDEXA President



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